

Title: Amendment  
Filing Date: September , 2003  
Address: To the Commissioner

Identification of the Case

Application Number: 41130/2001

Party effecting the amendment:

Identification Number: 000005108

Name: HITACHI, LTD.

Agent

Identification Number: 100075096

Patent Agent

Name: Yasuo Sakuta

Amendment 1

Object of Amendment - Document Title: Specification

Object of Amendment - Item Title: Claims

Method of Amendment: Conversion

Amendment Details

[Claims]

[Claim 1]

A method of transmitting an optical supervisory signal in an optical transmission system which multiplexes an optical data signal and an optical supervisory signal containing optical transmission system monitoring information and transmits them through an optical transmission line, the method comprising the steps of:

outputting exciting light which is used to amplify said optical supervisory signal;

multiplexing said outputted exciting light with said optical data signal through a first optical multiplexer;

sending said multiplexed exciting light and optical data signal to an optical fiber;

amplifying said optical data signal using said exciting light through said optical fiber;

outputting said optical supervisory signal;

multiplexing said amplified optical data signal with said outputted optical supervisory signal through a second optical multiplexer; and

transmitting said multiplexed optical data signal and said optical supervisory signal to said optical transmission line,

wherein the wavelength of said optical supervisory signal is out of the amplification range of said optical fiber and such a wavelength that transmission loss of said optical supervisory signal in said optical transmission line is virtually the same as transmission loss of said optical data signal in said optical transmission line.

[Claim 2]

The method of transmitting an optical supervisory signal as claimed in Claim 1, wherein the wavelength of said optical supervisory signal is in the range from 1.48  $\mu\text{m}$  to 1.60  $\mu\text{m}$ .

[Claim 3]

A method of receiving an optical supervisory signal in a optical transmission system which multiplexes an optical data signal and an optical supervisory signal containing optical transmission system monitoring information and transmits them through an optical transmission line, the method comprising the steps of:

receiving said optical data signal and said optical supervisory signal which have been multiplexed and transmitted through said optical transmission line;

demultiplexing said optical data signal and said optical supervisory signal;

receiving said demultiplexed optical supervisory signal;

outputting exciting light which is used to amplify said optical data signal;

multiplexing said demultiplexed optical data signal with said outputted exciting light;

sending said multiplexed exciting light and optical data signal to an optical fiber; and

amplifying said optical data signal using said exciting light through said optical fiber;

wherein the wavelength of said optical supervisory signal is out of the amplification range of said optical fiber and such a wavelength that transmission loss of said optical supervisory signal in said optical transmission line is virtually the same as transmission loss of said optical data signal in said optical fiber.

[Claim 4]

The method of receiving an optical supervisory signal as claimed in Claim 3, wherein the wavelength of said optical supervisory signal is in the range from 1.48  $\mu\text{m}$  to 1.60  $\mu\text{m}$ .